

## **REMARKS**

This is a full and timely response to the outstanding final Office Action mailed August 9, 2006. Upon entry of the amendments in this response, claims 1 – 19 remain pending. In particular, Applicants have canceled claims 37 - 40 without prejudice, waiver, or disclaimer. Applicants have canceled claims 37 - 40 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **Rejections Under 35 U.S.C. §112, First Paragraph**

The Office Action rejects claims 1 and 38 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. In particular, the Office Action alleges that the features of “the first amplifier being operative to amplify signals provided by the first linear array when the first resolution is being employed and to amplify signals provided by the second linear array when the second resolution is being employed,” were not described in the specification in a manner that satisfies the provisions of 35 U.S.C. §112, first paragraph. With respect to claim 38, Applicants have canceled this claim and respectfully assert that the rejection as to this claim has been rendered moot. With respect to the remaining claims, Applicants respectfully traverse.

In this regard, the specification discloses the following:

The embodiment of figure 4 provides high resolution for all colors, or high signal-to-noise for all colors, depending on the needs of the scanner operator. The embodiment of figure 4 may require more amplifiers (at least 6 amplifiers for figure 4 and at least 4 amplifiers for figure 3) if implemented using prior art control schemes. However, *signals may be multiplexed so that,*

*for example, in figure 4, row 200 may share an amplifier with row 206, row 202 may share an amplifier with row 208, and row 214 may share an amplifier with row 210, requiring only three amplifiers and three multiplexers.* (Application at page 8, lines 9 – 16). (Emphasis added).

Thus, the application clearly discloses the features alleged in the Office Action as not being adequately described. Based on at least this representative teaching, Applicants respectfully request that the rejections under 35 U.S.C. §112, first paragraph, be removed.

### **Rejections under 35 U.S.C. § 103**

The Office Action indicates that claims 1 - 19 and 37 - 40 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Suggs* in view of *Hatanaka*. With respect to claims 37 - 40, Applicants have canceled these claims and respectfully assert that the rejection as to these claims have been rendered moot. With respect to the remaining claims, Applicants respectfully traverse the rejections.

In particular, the Office Action generally indicates that *Suggs* teaches all of the elements of Applicants' independent claims, except for the additional features of the first amplifier. However, the Office Action indicates that *Hatanaka* teaches such an amplifier and that the combination of *Suggs* and *Hatanaka*, therefore, renders the claims obvious. In this regard, Applicants respectfully agree with the contention in the Office Action indicating that *Suggs* does not teach or suggest a coupler having a first amplifier that is operative to amplify signals from a first linear array and a second linear array. However, *Hatanaka* does not teach or reasonably suggest these features either. Specifically, *Hatanaka* discloses the following:

FIG. 3 shows a block diagram of a preferred embodiment of the present invention. A reference numeral 301 denotes a shift register for sequentially selecting the common electrodes B.sub.1, B.sub.2, . . . , B.sub.m and applying voltages; 302 indicates a photosensor element array; 303 is signal amplifying means for amplifying the photocurrent signals to be output to the independent electrodes S.sub.1, S.sub.2, . . . , S.sub.n ; 304 is first sample and hold means for memorizing and holding the output of the signal amplifying means 303; 305 is a second sample and hold means for memorizing and holding the

outputs of the signal amplifying means 303; 306 a first switching array for sequentially switching the outputs of the first sample and hold means 305; 307 a second switching array for sequentially switching the outputs of the second sample and hold means 306; and **308 differential signal amplifying means for obtaining the difference between the values of the signals to be output from the first and second switching arrays 306 and 307 and amplifying this difference as a signal.**

(*Hatanaka* at column 3, lines 17 – 36). (Emphasis added).

Notably, the above teaching indicates that the element alleged in the Office Action to correspond to Applicants' "first amplifier" is a differential amplifier that receives first and second input signals.

Additionally, *Hatanaka* teaches:

In this way, the synthesized signals of the photo current signals SS.sub.1 -SS.sub.n and noise component signals due to the crosstalk currents are memorized in the first sample and hold means 304, while only the noise component signals due to the crosstalk currents are memorized in the second sample and hold means 305. Thereafter, ***the switching elements constituting the first and second switching arrays 306 and 307 are respectively switched in the manner such that the switching elements of the same order are switched at the same timing in accordance with the timings of timing pulse signals (SSW.sub.1, SSW.sub.2, . . . , SSW.sub.n).*** In this way, the switching elements in each switching array are sequentially switched.

(*Hatanaka* at column 4, lines 23 – 35). (Emphasis added).

Based on the foregoing, it is also clear that an input from each of the first and second arrays is provided to the differential amplifier 308. That is, one of the switches associated with the first array and one of the switches associated with the second array are operated simultaneously in order to provide signals to the differential amplifier. Then, sequentially, another one of the switches associated with the first array and a corresponding one of the switches associated with the second array are operated simultaneously in order to provide signals to the differential amplifier. These teachings are in direct contrast to the limitations recited in Applicants' claims.

In this regard, claim 1 recites:

1. A multiple resolution sensing apparatus comprising;  
a plurality of first photosensor elements coupled together to form a first linear array and having a first length and a first resolution;  
a plurality of second photosensor elements coupled together to form a second linear array and having a second length and a second resolution;  
a coupler having **a first amplifier** and an output, said coupler coupled to said first linear array and to said second linear array; and  
a controller coupled to said coupler and providing a control signal to said coupler ***such that said output is coupled to said first linear array when said first resolution is employed and such that said output is coupled to said second linear array, instead of said first linear array, when said second resolution is employed;***  
***the first amplifier being operative to amplify signals provided by the first linear array when the first resolution is being employed and to amplify signals provided by the second linear array when the second resolution is being employed.***

(Emphasis added).

Notably, Applicants have recited a multiple resolution sensing apparatus in which several inter-related components are present. Thus, particular attention must be given to antecedent basis in order to properly interpret the recited features. In particular, Applicants' recite a "controller," the output of which "is coupled to said first linear array when said first resolution is employed and such that said output is coupled to said second linear array, instead of said first linear array, when said second resolution is employed." Of particular importance is the aspect relating to the output being "coupled to said second linear array, instead of said first linear array, when said second resolution is employed." At least this aspect is not taught or reasonably suggested by Suggs (as appears to be indicated in the Office Action) or by Hatanaka.

As set forth above, *Hatanaka* receives sequential inputs from the first and second arrays, in that different inputs are sequentially provided from each of those arrays. *Hatanaka* does not receive an input from one of those arrays without receiving an input from another as appears to be indicated in the Office Action. To the contrary, each of the arrays of *Hatanaka*

has multiple switches, and corresponding switches from each of the arrays are activated to provide the differential amplifier with signals. Thus, neither *Suggs* nor *Hatanaka* teach or reasonably suggest a controller as recited in claim 1. Therefore, Applicants respectfully assert that claim 1 is in condition for allowance.

Since claims 2 - 19 are dependent claims that incorporate all the features/limitations of claim 1, and are not otherwise rejected in the Action, Applicants respectfully assert that these claims also are in condition for allowance. Additionally, these claims recite other features/limitations that can serve as an independent basis for patentability.

**Cited Art Made of Record**

The cited art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

### CONCLUSION

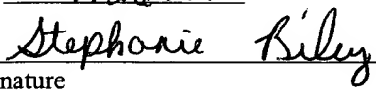
In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

  
\_\_\_\_\_  
M. Paul Qualey, Reg. No. 43,024

**THOMAS, KAYDEN,  
HORSTEMEYER & RISLEY, L.L.P.**  
Suite 1750  
100 Galleria Parkway N.W.  
Atlanta, Georgia 30339  
(770) 933-9500

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on 9/26/06.

  
\_\_\_\_\_  
Signature